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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,204	06/09/2005	Mi-Suen Lee	US020523	1787
<div>24737 7590 12/28/2007</div> <div>PHILIPS INTELLECTUAL PROPERTY & STANDARDS</div> <div>P.O. BOX 3001</div> <div>BRIARCLIFF MANOR, NY 10510</div>				
			EXAMINER	
			LAROSE, COLIN M	
			ART UNIT	PAPER NUMBER
			2624	
			MAIL DATE	DELIVERY MODE
			12/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/538,204	Applicant(s) LEE ET AL.	
	Examiner Colin M. LaRose	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/9/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The IDS dated 9 June 2005 is improper because it lists a WIPO document in the "U.S. Patent Documents" section. However, no action is required by Applicant because this reference has been listed on the accompanying Notice of References Cited.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-23 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,806,898 by Toyama et al. ("Toyama").

Regarding claim 1, Toyama discloses a method (figure 8) for processing an image containing at least a portion of a head of a human in a video phone system, comprising:

estimating an orientation of said head in said image using a pattern recognition technique (810);

computing a three dimensional model of a face surface of said human using a computer vision technique (822, 824); and

adjusting an orientation of said three dimensional face surface model to provide a frontal view (826).

Regarding claim 2, Toyama discloses said computing step further comprises the step of using a symmetric face assumption to obtain a complete three dimensional face surface model for a profile view (824).

Regarding claim 3, Toyama discloses said computing step further comprises the step of employing a structure from motion technique to obtain said three dimensional face surface model (column 13/1-10).

Regarding claim 4, Toyama discloses said estimating step applies a classification technique (i.e. determining the orientation of the head necessarily involves a technique that classifies, i.e., ascertains, the pose of the head using any known method—column 6/53-67).

Regarding claim 5, Toyama discloses said computing step generates a morphable three dimensional model (column 10/60—11/43: the 3D model of the face can be morphed, i.e., rotated, moved, changed, etc., into a desired shape/pose).

Regarding claim 6, Toyama discloses the step of mapping said three dimensional face surface model having an adjusted orientation to a two dimensional space (828).

Regarding claim 7, Toyama discloses the step of transmitting said adjusted image to a remote user (see e.g. figure 2).

Regarding claim 8, Toyama discloses the step of presenting said adjusted image to a local user (see e.g. figures 1 and 2).

Regarding claim 9, Toyama discloses an image processor (102, figure 1) for use in a video phone system, comprising:

a memory (104) for storing an image containing at least a portion of a head of a human;
and

a head pose corrector that

(i) estimates an orientation of said head in said image using a pattern recognition technique (810, figure 8);

(ii) computes a three dimensional model of a face surface of said human using a computer vision technique (822, 824, figure 8); and

(iii) adjusts an orientation of said three dimensional face surface model to provide a frontal view (826, figure 8).

Regarding claim 10, Toyama discloses said head pose corrector is further configured to use a symmetric face assumption to obtain a complete three dimensional face surface model for a profile view (824, figure 8).

Regarding claim 11, Toyama discloses said head pose corrector is further configured to employ a structure from motion technique to obtain said three dimensional face surface model (column 13/1-10).

Regarding claim 12, Toyama discloses said head pose corrector is further configured to apply a classification technique to obtain said head orientation (i.e. determining the orientation of the head necessarily involves a technique that classifies, i.e., ascertains, the pose of the head using any known method—column 6/53-67).

Regarding claim 13, Toyama discloses said three dimensional face surface model is a morphable three dimensional model (column 10/60—11/43: the 3D model of the face can be morphed, i.e., rotated, moved, changed, etc., into a desired shape/pose).

Regarding claim 14, Toyama discloses said head pose corrector is further configured to map said three dimensional face surface model having an adjusted orientation to a two dimensional modified image (828, figure 8).

Regarding claim 15, Toyama discloses said two dimensional modified image is transmitted to a remote user (see e.g. figure 2).

Regarding claim 16, Toyama discloses said two dimensional modified image is presented to a local user (see e.g. figures 1 and 2).

Regarding claim 17, Toyama discloses a video phone system (figures 1-2), comprising:
a memory (104, figure 1) for storing an image containing at least a portion of a head of a human; and
a head pose corrector (102, figure 1) that

(i) estimates an orientation of said head in said image using a pattern recognition technique (810, figure 8);

(ii) computes a three dimensional model of a face surface of said human using a computer vision technique (822, 824, figure 8); and

(iii) adjusts an orientation of said three dimensional face surface model to provide a frontal view (826, figure 8).

Regarding claim 18, Toyama discloses said head pose corrector is further configured to use a symmetric face assumption to obtain a complete three dimensional face surface model for a profile view (824, figure 8).

Regarding claim 19, Toyama discloses said head pose corrector is further configured to employ a structure from motion technique to obtain said three dimensional face surface model (column 13/1-10).

Regarding claim 20, Toyama discloses said head pose corrector is further configured to apply a classification technique to obtain said head orientation (i.e. determining the orientation of the head necessarily involves a technique that classifies, i.e., ascertains, the pose of the head using any known method—column 6/53-67).

Regarding claim 21, Toyama discloses said head pose corrector is further configured to map said three dimensional face surface model having an adjusted orientation to a two dimensional modified image (828, figure 8).

Regarding claim 22, Toyama discloses said two dimensional modified image is transmitted to a remote user (see e.g. figure 2).

Regarding claim 23, Toyama discloses said two dimensional modified image is presented to a local user (see e.g. figures 1 and 2).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner, can be reached on (571) 272-7401. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000. Any inquiry of a general nature or relating to the status of this application or proceeding can also be directed to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.



Colin M. LaRose
Group Art Unit 2624
22 December 2007